

# IMPLICIT SHARED BANDWIDTH PROTECTION FOR FAST REROUTE

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## Abstract of the Disclosure

A virtual overlay backup network is established to provide Fast Reroute capability with guaranteed bandwidth protection to a network that employs end-to-end circuits such as label switched paths (LSPs). In some implementations, backup bandwidth is allocated from an available backup bandwidth pool, as defined herein, available on each link.

- 10 Complete bandwidth protection may be provided rapidly upon detection of a failure while available backup bandwidth is shared between independent failures. In one embodiment, this is accomplished by provisioning backup tunnels to protect all links and nodes, wherein total available backup bandwidth on any link is not exceeded by the requirements of backup tunnels protecting any single node but backup tunnels protecting
- 15 different nodes may share bandwidth.